

alaribus albo brunneoque variegatis ; remigibus et cauda fusco-nigris ; corpore inferiore reliquo albo-flavescente ; iride brunneo-flava ; rostro magis virescente.

Only about Bur-da-Rebschi or Djebel-tiar, a guano island, five miles distant from the Somali coast near Mēd, where we observed six or eight pairs ; probably also on Abd-el-Kuri and the cliffs of Cokotora. In November I found fledged young on Bur-da-Rebschi. The flight of the adult bird is waving, Albatros-like, and not so rapid as that of *Sula fusca* or the Cormorants. The young birds are stupid and easy to be caught by the hand. They seem to feed solely upon fishes. Not difficult to tame.

[If not *Sula cyanops* of Sundeval, this species is new ! But Sundeval calls the face and naked throat simply *blue*, the iris "*flavissima*," the beak *blue*, olivaceous at the tip, the feet "*olive*" !! The *Sula capensis* is altogether a larger bird, and quite different in the *elongate* form of the gular membrane, which runs down the fore-neck in a narrow line. The *Sula dactylatra* of Lesson, which I have never seen in any collection, had the feet *yellow*. —Ed.]

129. PELECANUS RUFESCENS.

Not rare south of the Tropic, in the Red Sea and Gulf of Aden. Very frequent near Massaua and Amphila. *Abu-djirab*, Arab.

130. PHALACROCORAX, sp.

A flock at the end of November near Bender Gam (Somali).

XXXIV.—*Five months' Birds'-nesting in the Eastern Atlas.* By OSBERT SALVIN, B.A., Corr. Memb. Zool. Soc. (Part III.)

[Concluded from page 318.]

98. PTEROCLES ALCHATA. (Pin-tailed Sand Grouse.)

The extensive sandy plains termed the Harakta, of which El Tharf is one of the largest, are the only localities in which we met with this Sand Grouse. Like the following species, it makes no nest, but scrapes a slight hollow in the sand, in which it deposits its three eggs. These are laid in May, the young being hatched about the second week in June. The only species of *Pterocles* which occur in these elevated districts are

P. alchata and *P. arenarius*: further to the southward others are found.

99. *PTEROCLES ARENARIUS*. (Sand Grouse.)

Is found in the same localities as the last-mentioned species, but it also occurs about Djendeli and the Madracen, where I never met with *P. alchata*.

100. *CACCABIS PETROSA*. (Barbary Partridge.)

The Barbary Partridge is very abundant in all the country we visited, especially in the Regency of Tunis. It lays its eggs about the beginning of April, from eleven to fifteen forming the usual complement. It is known to the Arabs as "*El Hadjel*."

101. *TURNIX COTURNIX*. (Quail.)

Vast numbers of Quails are said to occur along the eastern coast of Tunis, and in the adjacent islands, during the period of the spring migration in April. A few remain to breed, and they may be met with in scattered pairs all over the country.

102. *OTIS TETRAX*. (Little Bustard.)

Throughout the extensive plains of Tunis the Little Bustard seems generally and plentifully distributed. In the Eastern Atlas its favourite resorts are the Arab corn-fields and grassy pastures; and it appears to seek rather than avoid cultivation, in this respect widely differing in taste from its congeners, *O. tarda* and *Houbara undulata*. The eggs of this species are laid about the middle of May, but some birds defer the period of incubation till June, as we obtained eggs as late as the 27th of the latter month. The nest was usually found in a corn field. One shown me by an Arab near Aïn Djendeli was so situated. It consisted merely of a little dry grass placed in a slight hollow in the ground. There were two eggs in this nest when it was shown to me. While I was endeavouring to make the Arab comprehend that if unmolested the bird would lay more, he destroyed the nest with a stick in his hand, but fortunately did not injure the eggs. Three or four seems to be the usual complement of eggs laid by one bird.

103. *HOUBARA UNDULATA*. (Houbara Bustard.)

We only meet with the Houbara in the Harakta country near

Guerah el Tharf. As this country was worked by Mr. Simpson while I was at Djendeli and Zana, I have nothing noted of the habits of this bird, as I did not see it when passing through that district.

104. *ÆDICNEMUS CREPITANS*. (Stone Curlew.)

This bird was our constant companion while encamped in the lake districts. We seldom used to see it during the day, but towards evening and after sundown the cries of several individuals resounded incessantly round our tents.

105. *CURSORIUS GALLICUS*. (Cream-coloured Courser.)

It was not until the end of June that I met with this bird. We had just broken up our final camp at Zana, and were returning by way of the Caravanserai of Aïn Yacoute to Constantine, when, at a short distance from the former place, we encountered a small flock in one of the undulating and sterile plains through which the high road to Batna and Biskra runs. The birds showed little symptoms of fear, and ran before our horses, or flew round our heads. At the time we thought they were not breeding there, but, as they were all in full adult plumage, I have since considered that they were there for no other purpose. The fact was, our faces were set homewards, and it was difficult to stop, even for the eggs of the Cream-coloured Courser. Mr. Tristram kindly gave me one of the eggs obtained by him, as mentioned in *The Ibis*, Vol. I. page 79; and, comparing this with Mr. Gurney's and Mr. Newton's examples from Tangiers, I may remark that, as regards my own specimen, the intensity of colour is decidedly in favour of the latter; and I attribute this inferiority to the effect of exposure, which in the parching climate of Southern Algeria is fatal to the colour of eggs.

106. *GLAREOLA PRATINCOLA*. (Pratincole.)

The Pratincole was found in the table lands of the interior, frequenting the salt lakes and freshwater marshes. Its fearless manner and familiar habits cause it to rank high among the interesting birds of the country; and I remember few that I have watched with greater pleasure. When in proximity to their nests, the whole flock come wheeling and screaming round, while some

dart passionately down to within a few feet of the intruder's head, retiring again to make another descent. When the first transports of excitement are over, they all alight one by one on the ground. Some stand quite still, watching with inquiring gaze; while others stretch themselves out, first expanding one wing, then the other, and sitting down extend both legs. In this position they remain some seconds as if dead, when, suddenly springing up, they make another circuit over head, and the whole flock passes quietly away. The bird makes no nest, but deposits its three eggs in a slight depression of the bare sand. The eggs are usually placed with their axes parallel. We several times visited places where numbers of these birds were breeding; yet we never succeeded in finding a young one, though many of the eggs were on the point of being hatched. This fact certainly favours the idea that on leaving the egg the young are capable of running like those of other *Grallæ*.

107. *CHARADRIUS PLUVIALIS*. (Golden Plover.)

I several times saw flocks of Golden Plover near the city of Tunis in February and the beginning of March.

108. *ÆGIALITES CANTIACUS*. (Kentish Plover.)

Occurs in abundance along the shores of the large lagoon of El Baheira which lies between Tunis and La Goletta. We afterwards found it breeding on the borders of most of the salt lakes in the interior.

109. *ÆGIALITES MINOR*. (Little Ringed Plover.)

In the neighbourhood of the marsh of Zana, we more than once met with this bird, but were unsuccessful in obtaining its eggs.

110. *GRUS CINEREA*. (Crane.)

The Crane is found in Tunis in great numbers during the winter months, frequenting the large plains. On one occasion, between Tunis and Oudena, I counted 108 of these birds on the wing at once. They are said to be migratory, and probably they seek their breeding haunts in the continent of Europe.

111. *ANTHROPOIDES VIRGO* (Demoiselle Crane).

Towards the eastern extremity of the marsh of Zana I several

times saw a small flock. We arrived there too late to obtain their eggs.

112. HERODIAS GARZETTA (Little Egret).

The marsh of Zana, which I have occasionally mentioned above, is one of those places where the Waders and Ducks seem to delight in congregating; and, as the swampy ground is of very limited extent, few spots furnish a richer feast to the eye of a devotee to the science of Ornithology. Our tents were pitched close to the springs at the western end of the lake, not far from the Marabout of Sidi el Hadj ben Ameer, an unimposing edifice erected to the memory of a saint of peculiar sanctity, but then tenanted only by a pair of Storks (*Ciconia alba*) and their young brood. My favourite walk in the morning was to take a circuit of the marsh. Starting at break of day, the first sound that assailed my ears was the harsh note of *Sylvia turdoïdes*—a small patch of reeds, not 60 yards from our tents, being occupied by a pair of these ceaseless chatterers. Attention would next be called to the Storks on the Marabout, which, on any one approaching, would make their young crouch down in their nest, while they, standing over, would assume an expression calculated to lead one to suppose that they were perfectly innocent of the existence of the young brood at their feet. As I walk on a few yards further to escape the din of a noisy colony of Spanish Sparrows (*Passer salicicola*), and stand still, the morning air bears from the neighbouring reeds the soft rattling note of Savi's Warbler (*Locustella savii*) to my ears, and I see the little songster perched on the extremity of the tallest reed, pouring forth its peculiar song, which, now swelling, now softening, has given to the bird the title of a ventriloquist. A few yards further, and the Pratincoles (*Glareola pratincola*) attract my attention by their incessant cries and furious attacks, as if resenting my intrusion in their domain. Among them may be a few Stilts (*Himantopus melanopterus*), which, after making a circuit overhead, alight close to a small pool of water. In this are seen some Shovellers and White-eyed Ducks (*Spatula clypeata* and *Nyroca leucophthalma*), which allow me to survey them with my telescope, but on closer inspection betake them-

selves to the reeds. As I turn now along the northern side of the marsh, I hear the Water Hen and Water Rail (*Gallinula chloropus* and *Rallus aquaticus*) harshly calling, while now and then a Wild Duck (*Anas boschas*) or Pochard (*Fuligula ferina*) flies out, and, wheeling round, returns. Here too an occasional Squacco Heron (*Buphus ralloides*) or Sandpiper (*Totanus glareola*?) rises; and passing suddenly a corner of the reeds, a startled Purple Water Hen (*Porphyrio hyacinthinus*) makes all possible haste to gain the denser cover. Leaving the tall reeds, and plunging knee-deep into water and mud, I now come upon the main body of Squacco Herons, and here and there a Bittern (*Botaurus stellaris*); here too may be seen the active little Baillon's Crake (*Crex baillonii*), allowing one but a momentary glimpse as it passes into the sedge. In the more open part, further to the eastward, Stilts occur in great abundance; and I never miss an opportunity of watching the ease and grace with which they manage their apparently unwieldy legs. As their nests are near, these birds make the air resound with their harsh, discordant cries. Near the Stilts I usually see an Avocet (*Recurvirostra avocetta*) or two stalking quietly about the marsh in search of food. Here, too, most of the ducks are to be seen; and 200 or 300 yards lower down, troops of Ruddy Shieldrake (*Casarca rutila*), and with them a small flock of Demoiselle Cranes (*Anthropoides virgo*). These last wend their way eastward to Chot Saboun, and I see them no more. Returning by the south side of the marsh along the water's edge, I find the Kentish Plover, and occasionally a Little Ringed Plover (*Ægialites cantiacus* and *Æ. minor*); while in the short reeds stand a row of Buff-backed Herons (*Herodias russata*), contrasting strangely in their sluggish movements with the active Little Egrets (*Herodias garzetta*), some five or six of which may be feeding near with a Glossy Ibis (*Ibis falcinellus*), the "Devil Heron" in their company. The Buff-backs wake up as I approach, and fly away to the Roman ruins close by, there to bask again, standing, some on the overturned stones, some on the decorated arches, two of which still stand at the northern extremity of the old city. The pools on the south side are full of Coots (*Fulica atra*), and here and there a White-headed

Duck (*Erismatura mersa*); and here, too, it was that I used to see the greatest number of Red-crested Whistling Ducks (*Branta rufina*). A distant screaming warns me to watch the Gull-billed Terns (*Gelochelidon anglica*) as they come skimming the water, making for the freshly-cut grass-fields to seek their breakfast of beetles and grasshoppers. At every corner of the reeds I now startle up a Little Bittern (*Ardetta minuta*); and the Grey-headed Wagtail (*Budytes flava*) continually shows itself. Soaring over the Arab tents, if the dogs allow me to look up, I see Egyptian Vultures and Black Kites (*Neophron percnopterus* and *Milvus ater*), and nearer the cliffs a few Choughs and Alpine Swifts (*Pyrhocorax graculus* and *Cypselus melba*). My walk is now terminated; and, ready for breakfast, I usually find the tents beset by Arabs: most of them come to talk with our servants, but some with more profitable intent, bearing vegetables, cooscoos and corn. The boys bring eggs or information about nests—the object of another ramble.

Though we never obtained the eggs of the Little Egret, I am inclined to think it a much earlier breeder than either the Buff-backed or Squacco Herons, as a female I shot at Zana, on June 22nd, bore every appearance of having hatched its young—the moulting of the feathers having advanced considerably, and the eggs in the ovary being small.

113. BUPHUS BUBULCUS. (Buff-backed Heron.)

Though local, the Buff-backed Heron occurs abundantly where it is found. I first met with it near Bizerta and afterwards at Zana, at which latter place it was common, a large flock frequenting the marsh. We did not obtain any of their eggs, and to all appearance the birds had not entered upon their domestic duties when we left their haunts. Is the bird mentioned in Mr. E. C. Taylor's 'Ornithological Reminiscences of Egypt,' and called by him *Ardea russata* and *Ardea bubulcus*, Savigny, this bird, or its Indian representative*? The eggs from Ceylon

* We believe that there is no doubt that the Egyptian bird is the true Buff-backed Heron—the same species which occurs in England. The Indian *Ardea coromanda*, Bodd., to which bird Temminck first applied the epithet *russata* (See Man. d'Orn. ed. 2. p. 566), is not separable, according to G. R. Gray, but is distinguished by Bonaparte (Consp. ii. p. 125).

are very different from those of this species collected by Mr. Tristram and Capt. Loche.

114. *BUPHUS RALLOIDES*. (Squacco Heron.)

Common in the marsh of Zana, but found in single birds or two or three together, rather than in flocks like the Buff-backed Herons.

115. *ARDETTA MINUTA*. (Little Bittern.)

I only met with this bird in the marsh of Zana, where it is extremely common.

116. *BOTAURUS STELLARIS*. (Bittern.)

A few pairs of Bitterns frequented the marsh of Zana. As far as we could ascertain, they had laid their eggs and hatched their young before we had arrived there.

117. *NYCTICORAX GRISEUS*. (Night Heron.)

I only observed this bird on the lake of Bizerta, where we found a few sitting about the fence-work made for stopping the fish.

118. *CICONIA ALBA*. (White Stork.)

Abundant at Bona and the old towns in the Regency of Tunis.

119. *IBIS FALCINELLUS*. (Glossy Ibis.)

I several times saw a Glossy Ibis accompanying a small flock of Little Egrets at Zana. It would appear, from Mr. Tristram's account of them at Lake Halloula, always to show this partiality for Herons, but not to be constant in its attention to one species.

120. *NUMENIUS TENUIROSTRIS*. (Slender-billed Curlew.)

In the Regency of Tunis, on more than one occasion, I saw a flock of these Curlews, and, on an undulating plain near El Djan, succeeded in shooting one.

121. *TOTANUS OCHROPUS*. (Green Sandpiper.)

While searching for snipe in a small marsh near Sousa, Mr. Simpson shot one of these birds.

122. *TOTANUS CALIDRIS*. (Redshank.)

Observed in the same marsh.

123. *RECURVIROSTRA AVOCETTA*. (Avocet.)

We only saw the Avocet at Zana and Djendeli, though we did

not until afterwards recognize the birds seen at the latter place as belonging to this species, which they undoubtedly did. At Chot Saboun, the eastern extremity of the marsh of Zana, the bird was most numerous. I myself only saw an occasional bird near our camp at Zana, Chot Saboun involving a longer ride than I could take without an attack of the climatic fever under which I suffered during the last three months of my stay.

124. *HIMANTOPUS MELANOPTERUS*. (Black-winged Stilt.)

Abundant at Zana, a few pairs occurring at Djendeli and Guerah el Tharf. Over the whole of the lower end of the marsh of Zana and Chot Saboun the Stilt breeds in great abundance amongst the wet grass, choosing for the position of its nest a small tuft, so as just to keep the eggs out of the water. Sometimes, however, this object is not attained, as we occasionally found nests in which the eggs were half immersed. The bird uses its long legs with much greater ease than might be expected; and its long, deliberate strides, as it stalks about in search of food, are far from being ungraceful. The only time they seem to be in its way is at the moment of taking flight, when they hang awkwardly down till the bird, being fairly started, stretches them out, extending them far beyond the tail. We used to search for the nests of this bird on horseback, and, on observing one sitting, to ride up without taking our eyes off the place. The bird would remain quiet till we were within thirty yards of the nest, when it would walk slowly away, till, aware of our purpose, it would rise and fly wheeling and screaming overhead. The young Stilt is able to walk almost immediately on leaving the egg; one we found was capable of moving about while the other three were struggling to free themselves from the shell. The nest is composed of a few bits of dead reed or grass. The complement of eggs laid by one bird is four.

125. *SCOLOPAX GALLINAGO*. (Common Snipe.)

Mr. Simpson and I found several Snipes in a small marsh near Sousa. I afterwards put one up at Zana, about the middle of June.

126. *RALLUS AQUATICUS*. (Water Rail.)

Common in the marshy ground of Zana and Djendeli.

127. *CREX BAILLONII*. (Baillon's Crake.)

This shy little bird we used to see occasionally at Zana, where we obtained one nest, which an Arab brought to our tents.

128. *PORPHYRIO HYACINTHINUS*. (Purple Water Hen.)

This magnificent species is common at Zana, where it keeps very much out of sight under the cover of the taller reeds. It is, I believe, in the habit of destroying the Ducks' nests whenever it can get an opportunity. Many a time did we leave a nest for the satisfactory determination of the species to which it belonged, and return to find every egg broken and sucked out. It may be calumny to ascribe these depredations to *Porphyrio hyacinthinus*; but I strongly suspect the charge is not unfounded. The eggs are so much taken by the Arabs that I can speak with no certainty of the usual complement laid by one bird.

129. *GALLINULA CHLOROPUS*. (Water Hen.)

Excessively common at Zana, judging from the number of eggs brought to us by the Arabs.

130. *FULICA ATRA*. (Coot.)

Also common at Zana, Djendeli, and Bizerta, in none of which places did I observe the Crested Coot (*Fulica cristata*).

131. *PHENICOPTERUS ANTIQUORUM*. (Flamingo.)

It seems to be an almost universal rule throughout the world, that where there are salt lakes, there Flamingos are found*. It certainly is the case in Tunis, and the province of Constantine in Eastern Algeria; no permanent salt lake of any extent is without them. Every one who has visited Tunis must remember the vast numbers that are to be seen in the lagoon of El Baheira and the lake on the north western side of the town, and will recall to mind the magnificent sight of a thousand or more of these beautiful birds rising from the water at one time, the

* Mr. Darwin ('Naturalist's Voyage,' new ed. page 66) states that he found Flamingos in Patagonia, Northern Chili, and the Galapagos Islands, frequenting the salt lakes. They are also found in the salt lakes of Siberia. (See 'Pallas's Travels, 1793 to 1794,' pp. 129-134.) The whole physical features of the Eastern Atlas range suggest the idea of its recent elevation above the sea-level; and I would include the upheaval of this portion with that of the Sahara, as conjectured by Mr. Tristram. (Ibis, vol. i. p. 155.)

whole mass, from the colour on their expanded wings, looking like an animated rosy cloud. They are extremely difficult of approach; and I only succeeded in shooting one, which proved to be a splendid male. On dissecting this bird, I found in the gizzard nothing but the vegetable matter that grows at the bottom of these lagoons; I am therefore led to suppose that this forms the principal part of its food, and not the worms which burrow in the mud, as Mr. Darwin suggests. ('Naturalist's Voyage,' new ed. page 66.) We found the bird equally abundant at Djendeli throughout the month of May, but obtained no certain clue to its breeding localities or nesting habits: the Arabs could tell us nothing, and we were unable to discover anything ourselves.

132. *CASARCA RUTILA*. (Ruddy Shieldrake.)

Though this bird is numerous in all the salt lakes of the elevated plains, its egg is one of the most difficult to obtain. One nest only rewarded our labours. The rarity of the eggs is hardly so surprising, when the situation chosen by this bird for its nest is considered. It selects a hole or crevice of a cliff for its breeding place, and associates with the Raven, the Black Kite, and Egyptian Vulture during the period of the reproduction of its young. Almost immediately on encamping at Ain Djendeli we used daily to see a pair of Ruddy Shieldrakes pass over our tents, their direction always being backwards and forwards between the cliffs to the south of us and the small, marsh between us and the lake. After careful investigation, the nest was discovered to be in a hole in the face of a rock, which required all the skill of Mohamed and all our appliances of ropes, &c. to reach. The result was four hard-set eggs, which are now in the collections of Messrs. Tristram, Simpson, J. Wolley, and myself. Though the Arabs were aware of the habits of this bird, we did not succeed in obtaining any more eggs. It is probable, from its name, that the Mountain Goose (*Casarca cana*) of South Africa has similar habits. These facts suggest the interesting question as to how and when the young, when hatched, are conveyed from their aerial home to their natural element, upon which I regret to say I can throw no satisfactory light.

133. *ANAS BOSCHAS.* (Wild Duck.)

Common at Zana.

134. *CHAULELASMUS STREPERUS.* (Gadwall.)

Also common at Zana.

135. *PTEROCYANEA CIRCIA.* (Garganey.)

I shot a Gargany in the Medjerdah just below Djebel Dekma during the first week in April.

136. *SPATULA CLYPEATA.* (Shoveler.)

In a small open pool of water to the northward of the Marabout of Sidi el Hadj ben Ameer at Zana, I used generally to see a pair of this Duck. It did not seem a common bird in the marsh.

137. *BRANTA RUFINA.* (Red-crested Whistling Duck.)

In the open pools at the upper end of the marsh of Zana, I used frequently to see several pairs of the Red-crested Duck. Two nests only were obtained. The second lot, consisting of seven eggs, were of a most brilliant fresh-green colour when unblown; the contents were no sooner expelled, and the egg dry, than the delicate tints were gone, and their beauty sadly diminished.

138. *FULIGULA CRISTATA.* (Tufted Duck.)

Abundant in the lake of Bizerta in March.

139. *FULIGULA FERINA.* (Pochard.)

Very abundant during the winter months in the lagoon of El Baheira. At Zana it was far from uncommon, but we were not fortunate in obtaining their eggs with certainty. The Arabs of the encampments surrounding the marsh ransack the whole of it for the eggs of the birds that breed there, those of the Ducks being their special object of search. The consequence was, we were unable to induce them to leave a nest, when found, in order that by showing it to us, we might, by seeing the bird, identify the species. It was, after all, giving up certainty for uncertainty on the part of the finder; for if we refused to buy the eggs, he still had them to eat; while, if he left them, another Arab was almost sure to take them. We had not much better fortune with some French mowers, who were there making hay for a

detachment of cavalry; for they found the Ducks' nests by cutting the grass over them, and desertion on the part of the bird infallibly ensued if the eggs were left.

140. *NYROCA LEUCOPHTHALMA*. (White-eyed Duck.)

This bird also breeds at Zana and Djendeli. We were more fortunate in obtaining their eggs than those of the other species of Ducks. The Widgeon (*Mareca penelope*) is not found in either place, at least we never saw it; and so brilliant a bird as the cock could hardly have escaped observation; consequently the eggs from these districts may fairly be ascribed to this bird, as no other Duck in the country lays similar eggs.

141. *ERISMATURA MERSA*. (White-headed Duck.)

Is common in the lagoon of El Baheira. We afterwards saw it at Djendeli and Zana, but did not obtain its eggs.

142. *PODICEPS CRISTATUS*. (Great Crested Grebe.)

Occurs in the lagoon of El Baheira.

143. *PODICEPS AURITUS*. (Eared Grebe.)

Very common in the lagoon of El Baheira during the winter. I afterwards observed it in Lake Djendeli, but did not obtain any eggs.

144. *PODICEPS MINOR*. (Little Grebe.)

At Zana the Little Grebe is common, and breeds there.

145. *THALASSEUS CANTIACUS*. (Sandwich Tern.)

I shot a Sandwich Tern flying over the lagoon of El Baheira, and saw others.

146. *GELOCHELIDON ANGLICA*. (Gull-billed Tern.)

The representative of this species in the lagoons of Tunis and the lakes of the interior appears to differ immaterially from the true *G. anglica*, which extends its range into India. Mr. Gould, who has kindly compared my examples with his own, assures me that this is the case. At Zana we found it breeding, a considerable number frequenting the marsh. Numerous as the bird was, we only obtained five eggs; one other egg our servant Bilgarzoum broke, having wound it up in his turban by way of putting it in a safe place to take it to the tents. Of course, when he went to unfold it, it was hopelessly flat. No

reasonable doubt can exist regarding these eggs, as no other bird at Zana could possibly have laid them, but we did not take any ourselves. They build, probably, on some of the small mounds on the north side of the marsh, which stand like islands out of the swampy ground. The statement in Mr. Tristram's Sale Catalogue of 1858, describing their eggs as laid on the tops of the highest hills, was an idea we entertained at one time from a vague description, given by the Arab who brought us the first eggs, of the place where he found them. This idea we afterwards rejected as resting upon insufficient evidence. In fact we left Zana before these birds had begun to sit, and consequently were never able to determine the exact localities where they bred. These Terns feed over the grass fields and open land, hovering and descending, as our more familiar species do on the English coast over a shallow, their food being grasshoppers and beetles, which there swarm, instead of sand-eels.

147. *HYDROCHELIDON FISSIPES*. (Black Tern.)

On one occasion I saw Black Terns skimming over the lake of Djendeli.

148. *CARBO CORMORANUS*. (Cormorant.)

Several Cormorants share with the Ospreys (*Pandion haliaëtus*) the posts set up in the lagoon of El Baheira.

I regret that I have been able to give so imperfectly the Arabic names of the birds in the preceding pages. Much more complete information on this point will be found on referring to Capt. Loche's 'Catalogue des Mammifères et des Oiseaux observés en Algérie', published at Paris, 1 vol. 8vo.

XXXV.—*Observations on the Birds of St. Croix, West Indies, made, between February 20th and August 6th 1857 by ALFRED NEWTON, and between March 4th and September 28th 1858 by EDWARD NEWTON.* (Part IV.)

[Concluded from p. 264.]

(Plate XII.)

† 50. [?] — (?) FLAMINGO. *Phænicopterus* — (?).

Large bands of some species of Flamingo—probably the *Ph.*

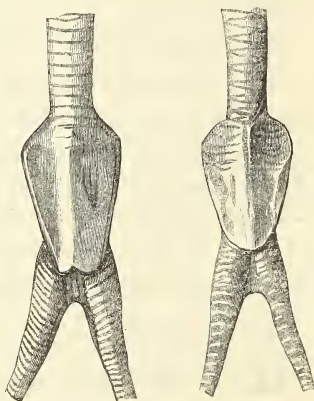
ruber of Linnæus—are said to have formerly visited St. Croix periodically, and even of late years a few seem to have been occasionally observed: on the south side of the leeward end of St. Thomas, a large indentation still bears the name of Flamingo-pan Bay.

51. BLACK-BILLED WHISTLING DUCK. *Dendrocygna arborea*, Eyton. *Anas arborea*, L.: Edw. Birds, pl. 193; Pl. Enl. 804. "Mangrove Duck."

This species is pretty common on the Mangrove Lagoons, but much oftener heard than seen. The whistling noise it makes while flying causes it to be well known by persons who have never even set their eyes on a specimen; for it is chiefly at night that it quits its solitary haunts to feed. It probably breeds in the island; but we have no positive authority for saying that it does so, and we regret we cannot furnish more information respecting it.

"I procured specimens of both sexes; and, as the trachea of no one member of the genus *Dendrocygna* has been figured, that I am aware of, I am glad to be able to give a representation of the organ in this species. The labyrinth, in form, may recall that of the Garganey (*Pterocyanea circia*, Bp.), but is sufficiently different from it in many respects.

"I have not seen specimens sufficient to be able to record the seasonal changes of plumage in this species. A male, killed July 21st, 1858, bore no sign whatever of moulting. In general appearance it greatly resembled a female obtained September 17th, 1858. The iris was brown, the bill black, legs dull ash-grey, the feet darker, and the claws black."—E. N.



52. [?] AMERICAN SCAUP DUCK. *Fulix affinis*, Baird. *Anas marila*, Wils. pl. 69. fig. 3; *Fuligula affinis*, Eyton; *Anas mariloïdes*, Vigors, nec Yarrell.

“ On March 29th, 1858, I saw some ducks on a lagoon which appeared to me to be of this species, but I was at too great a distance to be able to say much about them.”—E. N.

53. [?] DOMINICAN DUCK. *Erismatura dominica*, Eyton. *Anas dominica*, L.; Pl. Enl. 968.

“ In 1857 a pretty large lagoon between the Green Quay and Southgate Farm Estates, at the eastern end of the island, was frequented by a small flock of what seemed to me to have been most likely this species. On March 9th I first saw some; but they were sitting motionless on the water, and, having only a small glass, I could make out nothing about them. But I had a good opportunity of seeing them one day in May; there were then a good many of them, perhaps twenty or twenty-five; they swam very low in the water: indeed it almost seemed as if the hinder part of their backs were beneath the surface; and their tails stuck up perpendicularly at some little distance off, almost as though they had no connexion with the birds. On June 15th I all but succeeded in getting a shot at some five or six of these ducks, and had another good view of them. The lagoon on which I found them is nearly divided into two unequal portions by a low point which juts out from one side of it: about half-way along this spit of land I placed myself, squatting down among the mangroves, while I sent the lad who was with me round to the other side to try and drive the birds within shot of me—they being then about the middle of this portion of the pond. He arrived at the spot I had pointed out opposite to me, and disposing his garments in graceful folds about his head and shoulders, walked into the water, which he found to be nowhere above four feet in depth. The Ducks thereupon ceased feeding, and collected together, but did not seem for a time ill-disposed to be driven my way, merely keeping some eighty yards in front of him, as he waded and they swam across. Suddenly they stopped, swam to-and-fro for an instant or two; and I felt sure they had divined my presence, probably by getting wind of me. In another moment they were up: away they went, flapping along the surface; and as they rounded the point towards the other part of the lagoon I lost sight of them. I still lay quiet,

hoping they might come round; but they did not do so, nor could I discover whither they had gone. I do not think I ever saw the species again."—A. N.

We believe that several other species of *Anatidæ* occur from time to time, but especially in winter, in the island. From the descriptions which have been given us, we suppose the Dusky Duck (*Anas obscura*, Gmel.) and the American Wigeon (*Mareca americana*, Steph.) to be among the number; and in the spring of 1857, a flock of Wild Geese, probably the common Canadian species (*Bernicla canadensis*, Boie), were said to have been seen; we are, however, unable to indicate more particularly which members of the family come under the Creole designations of "Teal," "Wigeon," "Diver," &c.

† 54. BROWN PELICAN. *Pelicanus fuscus*, L.; Aud. pls. 423 & 424.

Probably the first birds to meet the eye of a stranger arriving at St. Croix would be a small flock of Pelicans. No shooting being permitted by the police in the roadstead of Frederiksted or harbour of Christiansted, they are there very tame, and take no heed whatever of what is going on, often flying within a few yards of the landing-stages or boats, utterly regardless of the human beings with whom they may or may not be crowded. In other places they are much more wary, and, unless one is concealed, admit of no near approach. A few may almost always be seen in a ride along the southern and western shores of the island, either resting lazily on a stump in the water, or with a degree of clumsy activity diving for fish, their occupation being to all appearance affected by the state of their appetite. When engaged in taking prey, they fly over the shallows which form their hunting-ground until they find a promising spot; there they alight and begin diving incessantly, and they seem always to rise to the surface, with their heads in a direction contrary to that in which they had them when they went under. They are said to breed on the island; but we were unable to ascertain that they did so, though they are probably resident all the year round; and we believe they do breed at Tortola or on some rocks adjacent to that island.

† 55. BOOBY. *Dysporus sula*, Ill.; *Pelecanus fiber*, & *P. sula*, L.; *Sula fusca*, Vieill.; Aud. pl. 426.

This species is met with occasionally in the island, but we are pretty sure that it does not breed in the immediate vicinity, and it evinces too great a partiality for the deep-sea fishery to occur often.

“ One was brought to me alive in September 1858 by a negro, who said he had found it asleep. I tried to keep it, but could not induce it to feed itself. Food was forced down its throat for several days, but at last it died. It was of an extremely fierce disposition, showing even in its reduced state no signs of fear.

“ Between St. Croix and St. Thomas, on September 28th, one came within five yards of the schooner in which I was; and I was told that one flew so close over the deck of one of the Royal Mail Company’s steamers that it was caught on the wing by a passenger.”—E. N.

† 56. FRIGATE BIRD. *Tachypetes aquilus*, Vieill.; Pl. Enl. 961; Aud. pl. 421; *Fregata aquila*, Cuv. “Hurricane Bird.”

This species we have only seen, as far as St. Croix is concerned, soaring at a very great height over the island or the adjacent sea, and a most beautiful sight it is to watch one or more of these birds hanging in the sky above. There is no motion to be observed in their wings; at one time the deeply forked tail is seen to be open, at another it is brought into a wedge-like shape, but the birds seem to rest immoveable. Before a gale, however, they are said often to fly quite low, or even to settle on the ground; and hence is derived their name, as under these circumstances they are more generally observed than at other times, and thus are said to be the forerunners of bad weather. This species is said to breed about Tortola.

“ On February 18th, 1857, on my outward voyage, between the islands of Antigua and Radonda, I saw a large flock of what appeared to me to be Boobies (the last-mentioned species), which with loud croaks and shrieks were plunging about; every now and then the confusion amongst them being heightened by a Frigate Bird descending from aloft and giving chase. Un-

fortunately this exciting scene took place much too far from the ship to be well enjoyed by me.”—A. N.

57. [?] — (?) CORMORANT. *Phalacrocorax* — (?) “Shag.”

Some species of this sort of bird must sometimes occur in St. Croix, according to the accounts we have received.

† 58. [?] — (?) TROPIC BIRD. *Phaëton* — (?). “Boat-swain.”

We do not venture, in the absence of specimens procured on the island, to suggest which of the two Atlantic species of this genus it is that is sometimes observed in St. Croix. Perhaps both the Common (*Ph. æthereus*, L.)* and the Yellow-billed (*Ph. flavirostris*, Brandt) may occur there, since the former is said to breed on Tobago, and the latter on the Bermudas (Jardine, Contr. Orn., 1852, p. 351 *et seq.*), besides being met with on the south side of Cuba (Lawrence, Baird's Pac. R. R. Rep., Birds, p. 885); but the geographical range of the different members of this genus seems at present to be little understood.

“On my voyage out in 1857, I saw the first Tropic Bird, February 12th, in longitude 44°. It took two or three rapid turns round the ship, but a good way off and high up, and then it left us. Meanwhile I had had a good look at it with my glass, and could see its *red* bill very plainly. It was therefore clearly *Ph. æthereus*. The same day we had passed some floating animals not very much unlike Portuguese Men-of-war (*Physalia*) in shape, but a good deal smaller, for which I tried in vain to fish. Whether to connect the birds' appearance with theirs or

* Examples which are said to have been of this—though perhaps merely because it seems to be the best known—species have occasionally been met with in Europe, and there is good reason to believe that it has once occurred in England. British ornithologists, however, have fortunately not hitherto provided it with Letters of Naturalization. There can be, we think, little doubt that the “Tropical Bird” mentioned at page 164 of the ‘Natural History of Lancashire, Cheshire, and the Peak’ by C. Leigh (London: 1700), was a specimen of *Ph. æthereus*, L., and the bird recorded by the late Professor J. Fr. Naumann in the preface (p. iv.) to the twelfth and last volume of his ‘Naturgeschichte der Voegel Deutschlands,’ as having been taken at Heligoland, was probably of this species.

not, I do not know. The flight of a *Phaëton* does not resemble that of any sea-bird I am acquainted with; its chief peculiarity consists in the regular and rather rapid strokes of the wing, without, as far as I could see, any intermission."—A. N.

"I saw the first Tropic Bird on my outward voyage in 1858, February 27th, our position at noon on that day being lat. 29° 22' N., long. 42° 42' W."—E. N.

† 59. [?] BLACK SKIMMER. *Rhynchops nigra*, L.; Wils. pl. 60. fig. 4; Aud. pl. 433.

"On June 14th, 1858, between St. Thomas and St. Croix, a bird, I believe of this species, passed close to the vessel I was in; I could see its black back and white belly distinctly."—E. N.

† 60. [?] SOOTY TERN. *Onychoprion fuliginosus* (Gmel.). *Sterna fuliginosa*, Gmel.; Wils. pl. 72. fig. 7; Aud. pl. 432; Yarr. B. B. 3rd edit. iii. p. 543, fig.

"Towards the end of May, 1857, I saw about midway between St. Thomas and St. Croix several birds which appeared to me to be of this species."—A. N.

Mr. Osbert Salvin informs us that on the 29th of May last (1859), when passing along the south side of Tortola and St. John's, he saw a good many of these birds. They came close to the ship, and he could make them out quite well. At the same time he also saw some Noddies (*Anous stolidus*, Leach), which species probably occurs about St. Croix as well.

† 61. ROYAL TERN. *Thalasseus regius*, Gambel. *Sterna cayana*, Aud. pl. 429.

In 1854 we received from St. Croix a specimen apparently of the species above cited, which had been killed in the island; and round its shores we have not unfrequently seen Terns flying, which, from their size, we should judge to be the same as that example.

† 62. LAUGHING GULL. *Chræcocephalus atricilla* (L.). *Larus ridibundus*, Wils. pl. 74. fig. 4. *L. atricilla*, Aud. pl. 443; Mont. Orn. Dict.; Yarr. B. B. iii. p. 439.

We have often seen a small Gull with a dark hood about St.

Croix, and, as we obtained skins of the true Laughing Gull at St. Thomas, we have not much hesitation in referring the former to this species*. It generally keeps in small flocks at no great distance from the shore. We do not know that it breeds on any of the neighbouring islands, but the harbour of St. Thomas is seldom without its little foraging party.

† 63. [?] — (?) STORM-PETREL. *Thalassidroma* — (?).

64. [?] — (?) STORM-PETREL. *Thalassidroma* — (?).

"On the 14th June, 1858, being between St. Thomas and St. Croix, a pair of small Storm-Petrels came under our lee for some minutes. On September 28th I saw some two hundred Storm-Petrels of a larger size, feeding much after the manner of Shearwaters (*Puffinus*, Briss.) near the harbour of Christiansted. The former of these birds I should imagine to have been Wilson's (*Th. wilsoni*, Bp.) and the latter Bulwer's Storm-Petrels (*Th. bulweri*, Gould); but I am only certain of one thing, which is that the examples seen on these two occasions were of two different species."—E. N.

"I saw no Storm-Petrels in the West Indian seas †; but on

* We believe that hitherto the only instance recorded on reliable authority of the occurrence in Europe of *Ch. atricilla* is that mentioned by Colonel Montagu, as quoted above, and this so long ago as the month of August 1774. The statements of M. Temminck (Man. d'Orn. ii. p. 779 *et seq.*) have been copied by other naturalists, for example, Professor Savi (Orn. Tosc. iii. p. 76) and Mr. Yarrell (B. B. iii. p. 442); but Dr. Schlegel has shown (Rev. Crit. p. 114 *et seq.*) that these originated in an error of Herr Natterer, who mistook individuals of the Mediterranean *Larus audouini*, Payreaudeau, for those of this species.

† "On the occasion mentioned in my note on the Frigate Bird (*vide supra*), mingling with the large flock of Boobies were a great many birds evidently Petrels, apparently about the size of our Manx Shearwater (*Puffinus anglorum*, Ray) and similarly coloured, that is to say, dark above and white beneath, but having much more the flight of a Fulmar (*Procellaria glacialis*, L.). They were, I suspect, of the species known to the French colonists of Guadeloupe as '*le Diablotin*,' mentioned, but not described, by M. De Lafresnaye in 1844 (Rev. Zool. vii. p. 168), under the name of '*Procellaria diabolica*, L'Herminier,' being doubtless identical with the *P. meridionalis* described by Mr. G. N. Lawrence in 1847 (Ann. Lyc. N. H. New York, iv. p. 475), and most probably with the *P. hesitata* of Dr. Kuhl (Beitr. zur Zool. p. 142). If this be the case, the last-mentioned name, having been published in 1820, has the priority, and should be used.

my passage from St. Thomas to Halifax, Nova Scotia, towards the end of August 1857, a day or two before arriving at the Bermudas, two or three came round the steamer, and these seemed to me to be *Th. wilsoni*. North of Bermuda we had a larger escort, amounting perhaps to forty or fifty at once, and there were clearly two species among them, but which they might have been I do not pretend to say. We were going at a good speed; and I fished for them to no purpose.”—A. N.

We have now enumerated all the species of birds which we have satisfactory reasons for believing to be found in St. Croix; but we must beg leave to subjoin a few remarks on some which have been said by former observers to occur in the neighbouring islands, and which further investigation may discover in the locality of which we have been treating.

The earliest work noticing the Natural History of the Danish West Indian Colonies, with which we are acquainted, is that of Dr. West, published, it would seem, at Copenhagen in 1793. The original edition we have not ourselves examined; but we have seen a translation of it into German*, which was made the following year, from which it appears that, though the Flora and some portions of the Fauna are more or less fully treated of, only two birds are mentioned (p. 243), namely—

“*Ardea cærulea*. v[ulgo]. *Gaulding*, Crab-eater.”

and “*Fulica chloropus*. v. *Coob* [sic], *Wasserhuhn*.”

The former of these is, we imagine, not the Linnean species of that name, but *Butorides virescens* (No. 46) of this paper, while the latter is, of course, *Gallinula galeata* (No. 43).

The next author who treats of the Zoology of the Virgin Islands, to which group St. Croix and St. Thomas belong, is M. Ledru, one of the naturalists accompanying the expedition (whereof the celebrated Maugé was also a member) commanded

Mr. G. R. Gray’s carefully drawn-up list of the synonyms of this and three other very distinct species which have been confounded with it, will be found in the ‘Zoologist’ for 1852 (x. p. 3696). The short list given by the late Mr. Yarrell (B. B. Suppl. 2, p. 63, and 3rd Edit. iii. p. 643), as well as his statement that a figure of this species is given by Forster in his unpublished drawings, is, I regret to say, incorrect.”—A. N.

* “Beyträge zur Beschreibung von St. Croix, &c.: von Hans West, Rector am Westindischen Schulinstitut, &c. Kopenhagen, 1794.” 8vo.

by Captain Baudin in the years 1796-8. His work*, accompanied by notes by M. Sonnini, was not published until twelve years after his return to France. It contains an "Essai sur l'histoire naturelle des îles danoises," from which (vol. ii. p. 39) we transcribe what relates to the birds, adding our own comments.

"La petite perruche, ou tovi à tête d'or.—*Psittacus tui* Gm., 352." This is in all probability the Parrakeet which is now found in St. Thomas, and there only (as far as we know), restricted to the hills on the eastern side of the harbour, called Havensigt. To our brother, Mr. F. R. Newton of St. Croix, we are indebted for some specimens of this bird, obtained during the past summer, which not only, as indeed might have been predicted from its *habitat*, is not Gmelin's *Ps. tui*, but appears to be a species hitherto undescribed. It belongs to the genus *Conurus*, and, though it a good deal resembles *C. aruginosus* G. R. Gray, yet differs from that bird in wanting the brown throat. We subjoin the character of this new species drawn up by Mr. Selater, who has bestowed upon it the name of *Conurus xantholæmus*, and described it in the 'Annals of Natural History' for September last (ser. 3, vol. iv. p. 225):—

"Læte viridis, pileo summo cærulescente; fronte lato, oculorum ambitu, lateribus capitis et gula aurantiaco-flavis: pectore fulvescente: abdomine et tectricibus alarum inferioribus pallide flavo-viridibus, ventre medio aurantiaco-flavo: remigibus alarum intus fusco-nigris, extus cærulescenti-viridibus; cauda subtus flavicanti-olivacea, supra dorso concolore, apicem versus cærulescente; rostro nigro, pedibus nigricantibus. Long. tota 9·5, alæ 5·3, caudæ 4·3."

The next birds in M. Ledru's list are—

"Le carouge de Cayenne.—*Oriolus Cayennensis*†, Gm., 391;" and "Le grèbe-duc-Laart.—*Colymbus thomensis*, Gm., 592:" neither of which do we know. And then comes

"Le pigeon vert.—*Columba Sancti-Thomæ*, Gm., 778"—

* "Voyage aux Iles de Ténériffe, la Trinité, Saint-Thomas, Sainte-Croix et Porto-Ricco, &c. Par André-Pierre Ledru, &c. Paris, 1810." 2 vols. 16mo.

† Perhaps *Pendulinus dominicensis* (Linn.), which is common in St. Domingo, and, we believe, occurs in Porto Rico.—ED.

of which we trust we may yet obtain specimens, though we have never met with any person in the island who was cognizant of a Pigeon in which green was the prevailing colour. Gmelin's *C. sancti-thomæ* is by Mr. G. R. Gray (List of Columbæ, B. M. (1856), p. 13) referred, but with doubt, to *Treron phænicoptera*, Blyth, a Nepalese species, with which the bird from St. Thomas is hardly likely to prove identical.

M. Ledru says that MM. Baudin and Maugé brought from St. Thomas "le cou-jaune,—*Matacilla* [*sic*] *pensilis*, Gm., 960, qui ressemble un peu à la linotte,—*fringilla linota*; mais il est plus mince et plus jaune."! We have before stated that we are sure that any person, on the look-out for birds in these islands during the winter months, would meet with many more of the North American Warblers than occurred to us; we therefore see no reason to doubt that this species, whose proper name appears to be *Dendraeca superciliosa*, Baird, may be found in either St. Thomas or St. Croix*.

"Le pigeon cocotzin, ou petite tourterelle,—*columba passerina*, Gm., 787," is evidently the *Chamæpelia trochila* (No. 28) of this paper, which was only separated by Prince C. L. Bonaparte in 1854 from the United States' species with which it had been previously confounded.

The next statement of M. Ledru is one to which we can scarcely give unqualified assent, even if we felt sure we understood his meaning. He includes in his list, but without naming them, "Cinq colibris et deux oiseaux-mouches d'une autre espèce (le mâle et la femelle), dont les couleurs sont moins foncées." Now there is certainly found in St. Thomas, besides the two Humming-birds *Eulampis chlorolæmus* and *Orthorhynchus exilis* (Nos. 8 and 9) of this paper, which also occur in St. Croix, a third species †, of which we have, thanks to the exertions of Herr. Riise, a good series of specimens; and these apparently differ only in size from examples of *Lampornis*

* It occurs in Jamaica, from which islands we possess specimens.—ED.

† "On May 25th, 1857, I saw in a garden in the town (Charlotte-Amalie) of St. Thomas, a largeish Humming-bird, which was nearly white beneath, and was therefore probably either a female or young male of this species."—A. N.

aurulentus (Vieill.) from St. Domingo and Porto Rico, with which Mr. Gould has allowed us to compare them. But we are far from thinking that the number of species of *Trochilidae* found in St. Thomas is so great as would appear from what M. Ledru says, even according to the most moderate interpretation of his words; and we venture to suggest that it is swollen from his having taken as specific distinctions the different states of plumage dependent upon age, sex, and perhaps season, assumed by the Humming-birds which we know to exist there. It may be worth remarking that there is a dealer in bird-skins in that island, whose endeavours to provide purchasers with what they may desire, rather than with what actually occur, are quite as unremitting as those of some of his paler-faced professional brethren in Europe; and we now have in our possession skins of *Petasophora cyanotis* and *Erythronota felicie* (Bourc.) said by him to have been obtained in St. Thomas, but which were, doubtless, imported from their native regions on the shores of the Spanish Main.

M. Ledru's list concludes with—

“Un todier, nommé vulgairement *perroquet de terre*,” of which we can only say that we know nothing.

Mr. John P. Knox, in the little work we before quoted from, devotes a chapter to the Natural History of St. Thomas, in which he gives a slight sketch of its Ornithology (Hist. Acc. St. Thos., p. 220), the greater part being copied from Ledru's work. He begins with a quaint account of the “Ani or Black Witch,” *Crotophaga ani* (No. 22), and goes on to tell us that, besides the “Parson Sparrow,” *Phonipara bicolor* (No. 21), “there is also another sparrow; but its name is unknown:” a species on which we can throw no light. He adds to the information supplied by Ledru respecting “the Yellow-neck (Matacella [*sic*] pensilis),” that “it is destructive to grapes,” and speaks of “the Thrush, one or two species,” including therein *Cichlherminia fuscata* (No. 10), as we gather from the context. He then states (p. 221) that “a species of parrot and a little parroquet (*Psittacus tui*) are found quite abundant near Havensigt.” This latter is doubtless the *Conurus xantholæmus* just mentioned; but we are at present ignorant of the former, though we believe there is such a species to be found, and it

may possibly turn out to be the Porto-Rican *Chrysotis vittata* (Bodd.). Mr. Knox is aware that "two species of Humming-birds visit the gardens," and truly remarks that the "Ground Dove," *Chamaepelia trochila* (No. 28), is plentiful. He also asserts that "the Green Pigeon (*Columba Sancti Thomas* [*sic*]), and several other varieties from Porto Rico, are often found," and that "Two species of hawk, the one much more numerous than the other, are frequently seen," adding that "they prey principally upon lizards," which is certainly true as far as regards the common one, *Tinnunculus sparverius* (No. 3), as we have observed. The statement that "The quail is very rare," we are disposed to question, but not so that which follows: "A single species, the owl, equally rare." At present, we are not aware what this last-mentioned bird may be, but we have hopes that Herr Riise will enable us to determine; it is even very possible that more than one species may occur*. Mr. Knox concludes his sketch as follows:—"The tropical sea birds, especially the pelican and various species of gulls, visit the coast and harbour. A small sandpiper, ducks, plover, kingfisher, and green heron (*Ardea viridis* [*sic*]), are occasionally seen." This last-mentioned bird is of course *Butorides virescens* (No. 46).

We before mentioned that we had good reason to believe that some kind of Woodpecker was occasionally found in St. Croix; but we were unable to give any indication whereby the species, or even the genus, could be ascertained. Apotheker Riise has very recently transmitted to us a specimen of a Woodpecker obtained by a collector employed by him, in Bieque or Crab Island near Porto Rico, and pronounced by Mr. Sclater to be the *Picus portoricensis* of Daudin (Ann. du Mus. d'Hist. Nat. ii. p. 285), first discovered by Maugé (Ledru, Voyage, vol. ii. p. 258), which belongs to that peculiarly American genus, *Melanerpes* of Swainson. *Melanerpes portoricensis* may therefore very likely be the species that is found in St. Croix. Mr. Riise

* "Mr. Cassin of Philadelphia informed me, in September 1857, that the Museum of the Academy of Natural Sciences at that place contained a specimen of *Scops portoricensis* from St. Thomas; but it escaped my memory to look for it in that magnificent collection."—A. N.

at the same time was so good as to send us from the same locality an example of *Saurothera vieillotii**, Bp.; and in thus acknowledging his kindness, we cannot but express our hope that he will continue to investigate the zoology of the neighbouring islands, and our wish that as great success may attend his ornithological as has already crowned his conchological labours.

Mr. Hewitson, whose fidelity as an oological draughtsman needs no commendation from us, and who has already evinced the interest he has taken in the success of this magazine, having kindly consented to delineate some of the eggs of the Birds of St. Croix obtained by us, we here subjoin a reference to the specimens figured in the accompanying plate, and we feel sure that all the readers of 'The Ibis' will join with us in congratulating him on the result he has achieved, when for the first, and we trust not the last time, extending his labours to exotic oology. For our own part, we can safely say that we were careful to send him, for the purpose of illustration, only eggs that had been rigidly identified.

EXPLANATION OF PLATE XII.

- Fig. 1. Egg of *Dendræca æstiva* (No. 15), p. 143.
 „ 2. „ „ *Phonipara bicolor* (No. 21), p. 147.
 „ 3. „ „ *Certhiola flaveola* (No. 7), p. 67.
 „ 4. „ „ *Tyrannus dominicensis* (No. 20), p. 146.
 „ 5. „ „ *Crotophaga ani* (No. 22), p. 148.
 „ 6. „ „ *Butorides virescens* (No. 46), p. 261.
 „ 7. „ „ *Tinnunculus sparverius* (No. 3), p. 63.
 „ 8. „ „ *Cichlherminia fuscata* (No. 10), p. 141.

And now, in conclusion, we must record the very great obligations we are under to the numerous friends, both at home and abroad, who have in one way or another assisted us in these "Observations." The names of several have already been mentioned as occasion offered; but there are many others—and among them some to whom we owe most of all—whose kind assiduity in furthering our objects deserves, and would obtain from us, a like acknowledgment, were we sure that that way of showing our gratitude would be the one most agreeable to them

* Also a species peculiar to Porto Rico, represented in Jamaica by *S. vetula*, in S. Domingo by *S. dominicensis*, and in Cuba by *S. merlini*.—ED.



as private persons. But there is one gentleman, with whom, from his position as Editor of 'The Ibis,' this excuse would not be valid; and therefore in exceptionally particularizing Mr. P. L. Selater as one of those to whom whatever merit there may be in this paper is largely due, we offer our best thanks equally to our unnamed friends, especially those resident in that island for whose prosperity we most fervently wish.

XXXVI.—*On the occurrence of White's Thrush* (*Oreocincla aurea*) *near Stratford-on-Avon, with remarks on the genera Oreocincla, Turdus, and Merula.* By ROBERT F. TOMES.

THE opportunity of examining a recently-killed specimen of the *Turdus aureus* of M. Hollandre (*T. Whitii* of Yarrell's 'British Birds'), occurs so rarely, that on the receipt of a recently-shot specimen, I thought it desirable to make an examination of it at once, before it had undergone mutilation of any of its parts in the process of preservation. Afterwards I examined with care the digestive organs, and the form and proportion of its sternum and other bones. The record of these peculiarities, with the addition of some remarks which I am able to give relative to its habits, will, I believe, render the following description more complete than any one which has yet appeared. When examining the osteology, I had occasion to make a comparative use of the skeleton of some other of our British Thrushes, and shall take the present opportunity of adding a few comments on the value of some of the divisions into which the genus *Turdus* has been divided.

I may commence by stating that the village of Welford, five miles west of Stratford-on-Avon, where the specimen was obtained, is situated in a bend of the Avon, and that the soil is a rich alluvium. Its position is highly favourable for the growth of timber and fruit trees; and it is well shrouded in orchards and small enclosures, fringed with their hedge-rows and ivied elms, affording a favourite haunt for many of the smaller birds, with a good supply of cherries and other fruits in the summer months, and of berries through the autumn and winter seasons. From a cherry orchard, a few miles down stream, I